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TABLE OF CONTENTS

Circular Letters:

Heart Puncture in Man for Diodrast Visualization of the Ventricular Chambers and Great Arteries. I. Its Experimental and Anatomophysiological Bases and Technique: Cardiac physiology has been enriched by thoracic surgery, especially through surgery on cardiac valves, the aorta and the pulmonary artery. Valuable data has also been obtained through cardiac catheterization, either of the right-or left-sided cavities, and catheterization of the aorta. Nevertheless, in order to obtain direct information concerning the activities of the heart, it is necessary to gain it on the operating table, through surgical intervention on the heart proper or the neighboring organs, or to accept the data of cardiac catheterization, which may lack physiological preciseness.

These facts led the authors to consider the possibility of a method which might facilitate the direct approach to the cardiac ventricles, eliminating the application of certain instruments or utensils whose mechanism might alter the final results of the investigation or even harm the vessels or the endocardium. This method is that of direct cardiac puncture by means of a trocar, with its mandrel, as an exploratory method.

This direct and simple procedure enables one to visualize the ventricles, the aorta and the pulmonary artery and its branches with exactitude.

The puncture is made on the inferior face of the right ventricle which abuts upon the diaphragm where no important coronary vessels can be found, if it turns out to be necessary to cross the interventricular septum, on its lowest portion. This has been verified on cadavers of dogs with the trocar left in position when the sternum and rib cartilages were opened later. It should be remembered that the heart is not always equally excitable; this depends on its state of activity. During systole the heart is refractory to any kind of stimulation, however strong it may be. This represents the period of systolic or periodic inexcitability, which is of importance in the appearance or nonappearance of extrasystoles. This governs the moment at which the puncture is made. Finally, it must be emphasized that the cardiac muscle responds to the law of "all or nothing", which means that once it is excited by an efficient stimulus, it contracts up to the maximum or not at all.

Technic. A trocar, 5 1/2 inches long from the tip to the end to which a syringe may be connected, is used. The exterior diameter of this trocar is 1.7 mm., and the lumen is 1.2 mm. It has a mandrel which does not overreach the end of the trocar. This end is neither too sharp nor too dull.

To inject the dye the Dos Santos injecting apparatus is used, modified by Milanes and Perez Stable.

To make the puncture gaped sterile towels and gloves are used and the skin is prepared with merthiolate. Before starting with the puncture, the patient is given atropine sulfate (1/4 mg.) in order to avoid the laryngeal spasm

which could be produced by pentothal, given intravenously by injecting 0.25 Gm., which is sufficient since the intervention takes only a short time. A few hours before starting with the puncture, an iodine test is made, introducing a drop of the substance to be used (70 percent diodrast solution) into the conjunctival sac to avoid accidents of iodism.

The patient is placed in the supine position to enable the operator to reach any of the ventricles. When a view of the aortic arch and of the descendent aorta is desired, the puncture is performed with the patient in a lateral position. Once the patient is in the proper position, the electrodes are fixed to take electrocardiographic tracings before, during, and after the puncture.

After the patient is anesthetized, the space between the xiphoid process at the left and the seventh costal cartilage of the same side is sought with the index finger of the left hand. The heart is touched by an epigastric paraxiphoid puncture, resembling the procedure of tapping the pericardium applied by Marfan. Two sensations are felt during the introduction of the trocar. One is when the first resistance to the trocar is noticed as it enters the pericardium; the other is the sensation of cardiac contraction itself reflected at the end of the trocar.

The penetration into the ventricular cavities can be proved by the rhythmical movements of the trocar and, when the mandrel is withdrawn, by the presence of dark blood from the right ventricle and of scarlet blood from the left ventricle. The dribbling way the blood comes out of the right ventricle and the pulsating way it comes from the left are also characteristic. Once the trocar has been introduced into the cavities, it is possible to register the intraventricular pressure. On one occasion this was done with an electromanometer.

An x-ray picture of the ventricular cavities, of the aorta, and of the pulmonary artery, as well as of the coronary arteries, can be obtained by injecting 50 to 80 cc. of diodrast under a pressure of 25 pounds into the right ventricle and of 35 pounds into the left one. This method is termed "cardioangiography," since the films are taken from the heart toward the vessels.

Once the puncture has been made, the trocar is withdrawn without bleeding. The patient returns to his bed fully awake, and he is checked radiologically and electrocardiographically up to 10 days after the puncture.

This technic has been applied 45 times on 30 patients without mortality or any untoward results. This is the first time, so far as is known, that cardiac puncture has been applied systematically with a trocar in man. (Am. Heart J., May '51, E. R. Ponsdomenech & V. B. Nunez)

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Bacillary Dysentery in Forces Afloat: The ever-present threat of serious shipboard epidemics of bacillary dysentery has again been emphasized by outbreaks that occurred during October-November 1950 on 3 vessels operating in the Far East. The etiologic agent has been found to be a sulfonamide-resistant strain of Shigella flexneri III (sometimes referred to as paradysenteriae "Z") that also caused widespread epidemics in the Pacific Fleet in 1945 and thereafter.

A brief resumé of the disease as it has affected forces afloat is presented in order that Medical Officers may be cognizant of, and alerted to, the epidemic trends involved. More than 6,000 officers and men were afflicted aboard ships concentrated in the Leyte Gulf in the spring and summer of 1945; additional large numbers became ill on vessels in Tokyo Bay during the fall and winter of 1945. During 1946, 1947 and as late as February 1948 there were recurrent shipboard outbreaks of the disease on Fleet units enroute to Bikini and operating elsewhere in the Pacific area. On 5 cruisers during the period 1946-1948 over 3,000 cases occurred; certain ships experienced more than 1 outbreak. No shipboard epidemics of consequence were reported from February 1948 until October 1950, a condition probably due to decreased numbers of personnel, minimal Fleet activities and other factors. Repeated examinations of representative cultures have shown that the recurrent shipboard epidemics have been caused by the sulfonamide-resistant strain of S. flexneri III which has evidently been maintained among Fleet personnel by asymptomatic carriers of this organism; several such carriers have recently been studied intensively. Each successive epidemic results in the establishment of additional numbers of carriers who harbor the organism for prolonged periods of time. When a sufficient number of carriers is inadvertently assigned to a ship, together with an adequate number of susceptible replacement personnel, conditions favorable to the onset of another outbreak are provided.

The disease varies markedly in severity. In its milder manifestation it is often diagnosed as "gastroenteritis", "enteritis" or "diarrhea". The severer cases are more frequently recognized and reported as "bacillary dysentery" when the patients are quite ill with fever, tenesmus, and diarrhea with blood, pus and mucus in the stools. Inapparent infection occurs in some individuals, and a certain percentage of these asymptomatic cases become prolonged carriers as do many of the well-recognized cases. The importance of these carriers in perpetuating the disease cannot be overemphasized.

Extensive studies of the diseases have been conducted since 1946 and, although much has been learned, additional data are essential. Attention of all medical officers is, therefore, invited to the provisions of two Bureau of Medicine and Surgery Circular Letters, currently in effect. These are 47-62 and 50-113.

Bureau of Medicine and Surgery Circular Letter 47-62 provides guidance for the medical officer in the event he is confronted with an outbreak of diarrheal disease. It also emphasizes the importance of bacteriological studies in such cases and requires that regardless of identifications of enteric pathogens made elsewhere, representative samples of subcultures of all strains of enteric pathogens isolated in the course of studies of diarrheal outbreaks or carrier states from any source shall be forwarded to the Commanding Officer of the Naval Medical Research Institute, Bethesda 14, Maryland. In addition, it requires that, in the event of an outbreak of diarrheal disease, an extra copy of the special epidemiological report described by the Manual of the Medical Department (paragraph 35D1) shall be forwarded to the same address.

Bureau of Medicine and Surgery Circular Letter 50-113 provides a list of Armed Forces Medical Laboratories and Epidemic Disease Control Units which may be called upon for assistance in investigation of outbreaks of diarrheal disease (or other communicable disease) or to which rectal swab cultures may be forwarded for determinative bacteriological study.

It is necessary that representative cultures from sporadic cases suspected of being Shigella be identified as to serological type as soon as possible after the onset of illness; occasionally, a few sporadic cases represent 'pilot' cases leading to a major outbreak. In order to facilitate such a procedure, full use of the facilities listed in the circular letters should be made; in addition, the services of the USS LSI(L) 1091 and the USS WHIDBEY (AG-141) should be sought as required when these laboratory ships are geographically available.

The etiologic agent was established in a recent shipboard outbreak because the medical officer utilized the rectal swab technique upon cases, food handlers and suspected carriers, streaking the swabs upon plates of SS agar which he prepared in his sickbay. This is a feasible procedure for other medical officers to follow in the event of the occurrence of "dysentery" or "gastroenteritis" or "diarrhea". If facilities do not exist aboard for determinative bacteriology, these plates should be forwarded to the nearest of the above mentioned units. Such cultures may remain viable for many days, and can furnish important information, especially when coupled with epidemiologic data. Such procedure will also be of importance in conjunction with an evaluation of the effectiveness of a vaccine.

The Bureau of Medicine and Surgery is continuing efforts directed toward prevention and control of subject disease. A monovalent S. flexneri III vaccine is currently being prepared for distribution and use in areas believed to be in immediate danger. Chloremycetin (Chloramphenicol) is recommended as the drug of first choice, in the treatment of acute cases of the disease or known asymptomatic carriers of the organism. The suggested dosage schedule is 0.5 Gm. (2 Kapseals) by mouth every 6 hours until a total of 15 Gm. has been administered, or more if required. Streptomycin may be

used as a second choice therapeutic agent. With either antibiotic, caution should be exercised against inadequate dosage that may lead to the development of resistant strains. Since the predominating epidemic strain in the Fleet is still the sulfonamide-resistant S. flexneri III, sulfadiazine and related drugs are not recommended in the absence of suitable laboratory studies.

Medical Officers and other Medical Department personnel are enjoined to cooperate to the utmost in the problem outlined above. (Preventive Med. Div., BuMed)

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Empirical Administration of BAL in One Case of Poliomyelitis: In the past few years dimercaprol (BAL) has been used as a treatment against certain heavy metal poisons because it combines with the metals and protects the enzymes which contain a sulfhydryl group from combination with the poison. Since viruses appear to be obligatory intracellular parasites and since they seem to cause necrosis by destroying or inhibiting certain intracellular enzyme systems, it was hypothesized that this preparation might be effective in the treatment of poliomyelitis. Because of the drug's known toxic properties, it was decided to use it only in a case of severe bulbar involvement.

Accordingly, BAL was administered to a 4 1/2 year old girl who was in deep coma and was observed as appearing toxic and moribund on the 3d hospital day. Dosage of BAL in oil intramuscularly was calculated for the initial dose at 3 mg. per Kg. of body weight. Subsequently, she received 0.15 cc. of the 10 percent solution intramuscularly every 4 hours, or 2.5 mg./Kg., for 4 days. Then the drug was given, 0.15 cc. 3 times a day for 2 more days, and discontinued. Twenty-four hours after administration of the drug was begun, the patient was able to respond to questions and open her eyes and move her arms and legs. Twelve days after treatment was begun the patient was transferred to the convalescent wing of the hospital. The child now has use of all extremities, is mentally alert and seems to have made a complete recovery. There is no evidence of facial or pharyngeal paralysis.

The patient apparently suffered no ill effects from the use of dimercaprol and experienced no ill effects from the injection. Both a transitory facial edema and a sharp rise in temperature within 12 hours after administration of the drug are attributed to her illness, rather than to the drug. Although the dosage is in accord with the recommendation of the Council on Pharmacy and Chemistry of the A. M. A., the number of injections she received a day were slightly greater than their recommended number.

As far as can be ascertained, this is the first time dimercaprol has been used in the treatment of poliomyelitis. Bulbar poliomyelitis is a

notoriously unpredictable disease, and recovery or death may ensue at any stage of the illness. No claim is made in this article for the effectiveness of BAL in this case. Nevertheless, the patient's course was steadily downhill until the day that dimercaprol injections were begun. She had been in an oxygen tent and had a tracheotomy tube in place for 24 hours, and her condition had been deteriorating. Clinical improvement was manifested within 24 hours after the start of the injections, and temperature fall and return to consciousness rapidly followed. Unfortunately, the author, who is in private practice, has not had the opportunity to treat other patients or to run a control series. It is felt that the rational basis for the use of BAL in poliomyelitis is sound and that further work should be done with the drug. This article is published in the hope that such work will be stimulated and that better evaluation of dimercaprol and its efficacy in poliomyelitis and other serious virus infections will be undertaken. (A. M. A. Am. J. Dis. Child., May '51, I. S. Eskwith)

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Certain Fallacies in the Diagnosis of Syphilis: The diagnosis of syphilis of the skin and mucous membranes should be made from a combination of clinical findings and laboratory tests. In most cases of syphilis of the skin this combination of clinic and laboratory findings gives the correct diagnosis. However, laboratory methods are not infallible in proving the syphilitic nature of existing lesions.

The finding of spirochaetes either in skin lesions or in specially stained sections can for all practical purposes be regarded as the most satisfactory and specific method; the exceptions, such as the possibility of confusion with the morphologically indistinguishable spirochaeta pertenuis, the causative organism of yaws, and with spirochaeta carateum, causing pinta, seem to be academic. Unfortunately, not all skin lesions are amenable to darkfield examination; not all cutaneous manifestations of syphilis contain spirochaetes and few physicians are equipped and willing to carry out this rather time consuming procedure routinely.

The laboratory method most generally used is the serologic examination of the blood. In highly commendable attempts to help the general practitioner and public health personnel to diagnose syphilis, it has been widely advocated that a blood test be done for any generalized skin condition, for any sore which does not heal rapidly, for patchy loss of hair, for a sore mouth, etc. Syphilis is rightly called the great imitator and it is certainly most appropriate to emphasize this point constantly. However, such appeals regarding the wide indications for blood tests imply, for the noncritical mind, that a positive outcome of the test confirms the syphilitic nature of the eruption. This is unfortunately not always the case.

The serologic methods used routinely at present are not specific for syphilis. Positive results are found not only in syphilis and the syphiloid diseases (yaws, pinta, bejel), but can be encountered in the form of technical false-positive or biologic false-positive reactions. Technical false-positive results can usually be excluded if a second examination confirms the original one. The biologic false-positive results present a serious problem. They are found in numerous diseases and conditions, sometimes only over a short period, sometimes permanently. An important point to remember is that a positive reaction is found in lepromatous leprosy, while the tuberculoid type gives a negative result. Positive reactions are seen often after smallpox vaccination, also after repeated blood donations. The occurrence of such biologic false-positive reactions in pregnancy is controversial; it is the author's impression that they are encountered, although rather infrequently.

In addition to these sources of error in diagnosing skin lesions as syphilitic, there exists the possibility that the patient has syphilis, but that the skin condition he presents at the time of the examination is entirely independent of it. The patient might have latent syphilis, he might have been adequately treated and be Wassermann fast.

It frequently happens that a patient presents a skin condition; the physician takes a blood Wassermann test, which is reported to be positive. The test may be repeated once and again the report comes back as positive. Treatment with penicillin is instituted. The skin lesions do not subside. More penicillin is given. The vehicle may be changed. Then, if there is still no improvement, arsenicals are administered, assuming that the patient is penicillin resistant. Later even some heavy metal may be added. In the meantime the skin affection may have become worse. Only after months or even years of ineffective treatment is consultation by a dermatologist sought. Then either clinical examination alone or histopathological examination of biopsied tissue reveals the presence of a disease entirely unrelated to syphilis. The patient might never have had syphilis or he might have been in the latent period.

Early recognition of infectious syphilis is of greatest importance to the community and to the individual, and one must use all the diagnostic means available to detect cases of infectious syphilis and have them treated without undue delay. However, it is just as important to protect the individual from being classified as a syphilitic without adequate evidence and to see that conditions developing in a patient who has or had syphilis are not automatically diagnosed as due to this disease, but are properly evaluated, diagnosed and treated, without dangerous delay.

Cases of erroneous diagnosis of syphilis from blood tests alone do exist and they can be of great importance to the individual and even in some instances to the community. To illustrate this point, the author

presents 10 brief case reports, selected as characteristic from a much larger group observed in the last few years in private practice and during consulting work in clinics. In all cases reported skin manifestations were present which were diagnosed as syphilitic; most of them were also treated for syphilis on account of positive serologic reactions. In 5 of them a biologic false-positive reaction was present, while in 5 of them the patients actually had syphilis. Six of those cases presented common conditions, which are frequently encountered: skin cancer, tuberculosis of the skin, lichen planus, herpes progenitalis, granuloma inguinale. Four were diseases not commonly seen: pityriasis lichenoides chronica, leprosy, leishmaniasis and amebiasis of the skin. In most of them valuable time was lost, until the correct diagnosis was made.

In the minds of many physicians and especially health-department personnel the idea that there must be a causative connection between a positive serologic reaction and a coexisting skin condition, if it is not just scabies or acne, seems to be firmly implanted. If a condition, diagnosed by serologic tests as of syphilitic origin does not respond to penicillin therapy, the only conclusion reached is: the patient is penicillin-resistant. And when he does not react to arsenicals either, he is resistant to arsenicals, and finally also to heavy metal. Usually, the correctness of the original diagnosis is not questioned. This situation would have to be accepted if the serologic examination were the only test available. Fortunately, this is not so. An excellent method to confirm or disprove the syphilitic nature of any skin manifestation is the histopathological examination of the lesion in question. The material can be obtained easily; it can be shipped to any place if facilities are not present locally. The biopsy can be performed either by a small excision or by a skin punch. In certain granulomatous conditions it may not be possible to make a definite diagnosis from the section alone, but in most instances it will be possible to say whether the lesion is of syphilitic origin or not. In the extremely rare cases in which no definite diagnosis can be made from the section alone, the combination of the clinical appearance, the histopathological picture and the various other laboratory examinations will lead to the correct diagnosis. The delay in initiating treatment caused by waiting for the outcome of the histopathological examination need not be greater than that caused by waiting for the result of a blood test. (Urol. & Cutan. Rev., May '51, P. Fasal)

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Recurrent Inguinal Hernia: It is agreed by a large number of surgeons that the recurrence rate following inguinal hernia repair approximates 12 percent, but unfortunately, one is confronted with the fact that many patients, when a hernia recurs after treatment, are inclined to seek a different surgeon to repair it. Among the many factors contributing to the recurrence of inguinal hernia, the degree of knowledge of the operating surgeon must be

considered. Unfortunately, in recent years the physiobiologic aspects of surgery have been overemphasized and the anatomic basis of surgical technic somewhat neglected; this handicaps many young surgeons by depriving them of a thorough fundamental knowledge of the structures to be repaired.

The experience of most surgeons has revealed that the recurrence rate of direct inguinal hernia is much higher than that recorded for the indirect type. Some clinics report the direct rate up to 30 percent, as compared with 7 to 12 percent for indirect hernia. In general, one finds the recurrence of direct inguinal hernia in patients of the older age group accompanied by gradually developing attenuation of the structures, obesity, malnutrition and a decreased fibroblastic reaction.

One cannot assume a dogmatic or arbitrary view as to exactly what constitutes a recurrent inguinal hernia. The appearance of a hernial sac in the same location as that observed at the original operation may denote an aborted effort at high ligation of the hernial sac or, as has been noted on more than one occasion, no ligation at all. One may observe a recurrent inguinal hernia of the direct type in a patient who has undergone surgical repair of an indirect inguinal hernia only a few weeks earlier. This must lead one to conclude that at the original operation a direct hernia was present or a definite defect was coexistent in the transversalis.

The great problem encountered in cases of recurrent inguinal hernia is repair of the direct type. Most available statistics indicate that direct inguinal hernia constitutes about 10 percent of all inguinal hernias, but for recurrent direct inguinal hernia the incidence is elevated to 50 percent. Incomplete repair or failure to observe a defect in the inguinal floor eventuating in recurrence may account for a considerable part of this high rate. Many direct recurrences have followed an injudicious primary operation with superimposed surgical trauma.

The amount of literature that has accumulated on the repair of inguinal hernia by use of the superior pubic ligament in hernioplasty makes it evident that excellent results may be obtained with the procedure. Anson and McVay, on the basis of their anatomic studies, pointed out some of the prevailing errors concerning the inguinal ligament and Cooper's ligament: that the normal insertion of the inguinal strata is not the inguinal ligament, but Cooper's ligament; and that the only relationship of the transversalis fascia, transversus abdominis, and internal oblique aponeurosis to Poupart's ligament is by contiguity. McVay has done much to popularize the Cooper ligament operation and to prove its superior value. Holloway and Johnson have used the Cooper ligament in conjunction with the lateral tendinous border of the rectus muscle in the repair of recurrent inguinal hernias.

The author has employed 3 variations of the Cooper ligament operation in repair of recurrent inguinal hernia, in both direct and indirect recurrence: (1) the transversalis fascia is used as the basement of the canal by suturing it to the ligament of Cooper with a relaxing incision in the rectus sheath; (2) suture fixation of the transversalis fascia and conjoined tendon in combination to the ligaments of Cooper and Poupart; (3) a relaxing incision in the rectus sheath followed by the apposition of the tendinous lateral margin of the rectus muscle to Cooper's ligament.

There are several points that should be stressed with regard to any operative procedure for recurrent inguinal hernia:

1. The sac in both the direct and the indirect hernia should be opened. In the former the redundancy should be excised and the peritoneum sutured; in the latter, the incision makes for safer and higher ligation. Inversion in either is not believed to be good practice.
2. When one visualizes the epigastric vessels without their normal covering of transversalis fascia, it is immediately obvious that a snug repair at the internal ring is necessary.
3. If one is confronted with a direct sac accompanying an indirect hernia, the technic of Hoguet may be used. By traction outward on the indirect sac, the peritoneum of the direct sac may be transposed lateral to the epigastric vessels, and the two sacs become as one.
4. Should one fail in the Hoguet maneuver, the epigastric vessels may be divided to achieve a more satisfactory repair.
5. Relaxing incisions are much more important than has been emphasized in the literature.
6. In all modifications of the Cooper ligament operation for recurrent inguinal hernia, clear exposure of the ligament is necessary, both for good apposition during insertion of the sutures and for avoidance of injury to the femoral vein or an anomalous vessel, such as the obturator artery, which is well known for its vagaries.

In the author's opinion the problem of recurrent inguinal hernia may be substantially bettered by using tantalum mesh for hernias associated with loss of tissue or atrophy of the structures in conjunction with a Cooper ligament repair. For all others he advocates the use of cotton sutures but finds no fault with those who use silk, fascia or wire. (J. Internat. Coll. Surgeons., May '51, D. P. Hall)

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The Syndrome of Malignant Malnutrition: Kwashiorkor is an extremely complex form of nutritional deficiency which today presents one of the greatest challenges to modern nutrition science. First discovered in Africa among children under 5 years of age, but past early infancy, it has since been recognized in many other parts of the world where tropical climates and grossly

inadequate eating habits prevail; among them are: southern India, Brazil, Central America and the West Indies. Tropical diseases such as malaria, intestinal parasites and hookworm infestation are invariably a part of the clinical picture but have been ruled out as primary factors in its etiology. The clinical features of kwashiorkor closely resemble the manifestations of pellagra, beriberi, nutritional edema and nutritional anemias as observed in the United States, Europe, and the Orient. Yet, kwashiorkor is more than a combination of these diseases. It does not respond to the traditional vitamin therapy of these diseases and it presents a clinical picture which distinguishes it from these diseases in numerous respects. The disease seems to be distributed in those areas where maize is the major dietary staple. The proteins of maize (chiefly zein) are known to be grossly inadequate.

Clinical Symptoms of Kwashiorkor. Cicely Williams, in 1933, first described the disease as occurring in the African Gold Coast Colony. The child, about 18 months old, well nourished but irritable, presents slight edema of the hands and feet, and the skin shows some degree of depigmentation. There suddenly appear on the ankles, on the knees, above the wrists, and on the elbows, some small black patches, first on the extensor surfaces and gradually spreading. These patches appear to consist of the epidermis which has become dark, thickened and crumpled, though it remains soft and pliable. The number and extent of these patches increase, apparently where there is any focus of irritation or pressure. Soon the legs and forearms, knees and elbows, are covered. In a few days as the older patches mature, they strip off very readily, leaving a pink, raw surface exposed underneath. The edema subsides at this stage. The patches of desquamation progress up the thigh and may become severe on the buttocks. Very small patches may also be seen on the face, back, and elsewhere. Gradually, the skin at the corners of the mouth and eyes also begins to peel off, leaving raw areas. There is photophobia, but no eversion of the eyelid. Sores on the mucous membranes develop and, perhaps, a corneal ulcer. Conjunctivitis has not been marked. Diarrhea is persistent, especially in the later stages. The child is extremely irritable, and may die in a few days if it is not treated. The only characteristic anatomic abnormality observed by Williams post-mortem was the development of a pale, fatty liver in all cases and occasional kidney degeneration.

Treatment consists chiefly of cod-liver oil and a good brand of tinned milk, given under supervision in a hospital, together with other good foods, plus medication for the skin, eye and mouth lesions.

Within the last 5 or 6 years, clinical studies on malignant malnutrition and the many variations of this disorder which are becoming apparent throughout widely-scattered areas of the world have been conducted by an increasing number of investigators. To date, a small degree of progress has been made in treatment. The outstanding feature of both the disease and its therapy is the extraordinary resistance to therapy with individual nutrients, whether they be vitamins, lipotropic substances, liver extract, or protein concentrates.

Only on a diet of complete foods, preferably of animal protein origin, has any degree of remission been possible, a phenomenon which has as yet no satisfactory explanation. In most cases studied, the disturbance has proceeded to the stage where physiological impairment of the liver and digestive tract is so severe as to interfere with the utilization of foods and nutrients when they are finally provided. Possibly protein deficiency may interfere with the formation of enzymes essential to the utilization of foods, thus explaining both the lack of response to various supplements and the favorable effects of milk.

The mortality in kwashiorkor, reported by early workers to range from 60 percent to 90 percent, has been reduced to less than 10 percent in the Uganda - to cite one example. The nature of the dietary treatment is known, at least empirically, to be a liberal diet of small, frequent meals including milk, meat, brown bread, liver, eggs, fish. The major concern is to provide natural foods, particularly those high in animal protein and to treat all concommitant infections which may interfere with health and normal nutrition. (Borden's Rev. Nutrition Res., April '51, R. Woods)

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A Simplified Silver Impregnation Method for Vaginal Smears: The vaginal smear method for the diagnosis of carcinoma of the uterus was introduced by Papanicolaou and Traut in 1943. Recognizing that the most important cytological criteria for malignancy were based upon nuclear characteristics, the present authors concentrated their efforts upon the development of a technic that would readily expose the chromatin elements of the nucleus. A preliminary description of a silver impregnation method, based on the more complicated diammine silver carbonate reticulum method of del Rio Hortega, was reported in 1948. Subsequently, the technical details have been improved and standardized as outlined below.

Preparation of vaginal and cervical smears. Using a saline-moistened cotton applicator, a sampling of exfoliated cells is obtained from (1) the posterior fornix of the vagina and (2) the cervical os at the squamocolumnar junction. The smear is made by rolling the applicator over the surface of a clean microscopic slide.

Fixation of smears. The smear, while still moist, is immersed in 20 percent formalin (1 volume formaldehyde diluted with 4 volumes distilled water) for at least 15 minutes. The smears may be allowed to dry following fixation or carried directly to the next solution.

Staining procedure. 1. Rinse smears in ammonia water (5-6 drops ammonium hydroxide in 100 ml. distilled water). 2. Rinse successively in 2 jars of distilled water. 3. Impregnate with a medium strength silver carbonate solution for 2-3 minutes. This dilution of silver carbonate is prepared by adding 1 volume of stock solution to 1 volume of distilled water. The stock

solution is prepared as follows: To 100 ml. 10 percent silver nitrate add 300 ml. 5 percent sodium carbonate. Then carefully add ammonium hydroxide drop by drop (about 10 ml.) with constant shaking until the precipitate is just dissolved. An excess of ammonium hydroxide will reduce impregnation and should therefore be avoided. This solution should be stored in a brown glass bottle. 4. Remove excess silver carbonate solution by touching edge of slide to absorbent paper and reduce in 1 percent formalin (1 ml. 40 percent formaldehyde diluted with 39 ml. distilled water) for 1 minute. Although not a necessary part of the procedure, a lighter background and one with few particles of reduced silver will be obtained if the formalin solutions for fixation and reduction are buffered to a pH of approximately 7. The authors use one of the phosphate mixtures tabulated by Hawk, Oser, and Summerson to dilute Merck's reagent quality formaldehyde. 5. Rinse thoroughly in distilled water and examine under the microscope for staining quality. In the event that a heavier impregnation is desired, cover the slide again with silver carbonate solution for 2-3 seconds, reduce once more in 1 percent formalin, and rinse in distilled water. 6. Dry in air or by rinsing successively in 90 percent and absolute alcohol, rinse in xylol, and mount in clarite or Canada balsam.

In the authors' laboratory the routine evaluation of more than 3,000 cervical and vaginal smears has been accomplished without clearing and mounting (Step 6). These final steps in the procedure have been reserved for a few smears which proved unusually difficult to evaluate and for those preparations from which photomicrographs have been made.

The most practical method for applying the silver carbonate solution is as follows: Place slides face up on parallel glass rods over any convenient collecting vessel (a commercial-type staining rack is available). Pour a small quantity of solution into a funnel with filter paper in place and successively flood each slide.

All the cellular components of the vaginal smear are readily identified following impregnation with silver. These elements may include the various types of epithelial cells from the vagina and uterus, leukocytes, vaginal flora, pathogenic organisms such as yeast mycelia, spermatozoa and occasional erythrocytes. The red blood cells are usually hemolyzed in the aqueous formalin solution and are encountered only in preparations that have been inadvertently dried before fixation.

In general, the nuclear chromatin of epithelial cells appears intensely black following impregnation with diammine silver carbonate. The color of the cytoplasm will vary from pale yellow to dark brown. Malignant cells are usually recognized with ease because of the fact that their abnormal nuclei become deeply impregnated.

Not infrequently the nuclei of normal, and especially malignant, cells are so heavily impregnated with the silver solution in the routine procedure

that they appear as solid, amorphous elements. This condition obscures the details of chromatin distribution and nucleoli status within the nucleus. In any instance where a careful study of these elements is indicated, it has been found very helpful to immerse the slide briefly in a 5 percent solution of sodium thiosulfate following Step 5. With a little experience, this procedure will result in a demonstration of fine chromatin detail. This step is most useful in those cases in which a diagnosis rests upon the condition of the nucleoli.

From September 1947 to September 1950, this method has been applied to more than 2,000 clinical cases in which there was some reason to suspect the existence of carcinoma of the uterus. The accuracy of the method was found to compare very favorably with reported accuracies for conventional, polychrome methods. Preliminary studies indicate that the method can be applied equally well to centrifuged concentrates of gastric washings and secretions of the respiratory tract.

The following technical advantages for the silver impregnation method may be listed: (1) The procedure is relatively simple, rapid, and inexpensive; (2) chromatin elements are deeply impregnated with silver carbonate; (3) counterstains are not necessary; (4) the masking effect of large numbers of erythrocytes is avoided; (5) silver carbonate impregnated smears are less fatiguing to examine than polychrome-stained smears and (6) the diagnostic accuracy of the method compares very favorably with accuracies reported for other methods. (Science, 18 May '51, G. M. Riley et al)

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Pain Control Following Upper Abdominal Operations: Pulmonary complications may follow any type of surgery. In 5,869 surgical patients the occurrence of pulmonary morbidity following extra-abdominal, lower abdominal and upper abdominal operations was found to be 1 percent, 11 percent and 19 percent, respectively. Every possible precaution should be employed, therefore, to prevent these complications in patients who have undergone operations in the upper region of the abdomen. This is particularly true in poor risk patients, patients with pulmonary disease, the aged, and the emotionally unstable who are actual or potential narcotic addicts.

Pain diminishes respiratory excursions; there is a reluctance to cough or breathe deeply. Narcotics will relieve pain but will inhibit the important cough reflexes. Intravenous injections of procaine hydrochloride have been tried, but it is questionable that a sufficient local concentration of procaine could be delivered by the intravenous route to relieve postoperative pain. Recently, Blades and Ford, at the George Washington University, described a technic which appears to be of value in reducing pain following operations on the chest. Their method consists of the implantation of polyethylene tubes in the incision in the chest wall prior to closure. Through these tubes, the ends

of which are fixed in the dressing, procaine is injected. Since the need for narcotics following chest operations has been markedly reduced, it seems reasonable that a modified technic for upper abdominal operations should be evaluated.

In this series, 24 patients undergoing cholecystectomy were studied in order to establish the effectiveness of procaine injections through polyethylene tubes in upper abdominal wounds. One half of the cases were used as controls, while in the remainder 3 polyethylene tubes were placed beneath the anterior rectus sheath of the abdominal wound and the ends brought out through a lateral stab wound. These were placed so that procaine was delivered to the upper, middle and lower parts of the wound. The tubes were attached to no. 19 gage needles which had been pushed through a cork. At 3 hour intervals, 3 cc. of 2 percent procaine solution was injected into each tube.

In both groups the need for reducing pain was greatest between the 12th and 36th postoperative hours. In neither group was pain suppression necessary after the 84th hour. In the control group, an average of 11.1 hypodermic injections was necessary during the 60 hour period, while in the treated group the average was 3 injections. There was also a greater need for narcotics in the control group between the 60th and 84th hours. The effect of this technic on the wound cannot be established from this small group of patients, but there was no interference of tissue repair. Follow-up studies revealed healing in the treated group to be complete in all instances.

It appears that adequate control of pain during the first 60 hours is most important. The tubes may be removed at this time. On the basis of the time of removal of the tube it was felt that wound healing, fascia, muscle, fat and skin would not be materially influenced. It is important to emphasize that in no case in this series was the nurse instructed to employ procaine injections in lieu of a hypodermic injection or a narcotic.

Since most postoperative pulmonary complications occur in the first 3 postoperative days, it is apparent that the technic which has been described will be of value, particularly for patients with pulmonary disease. The procedure described will guarantee a simple method for local analgesia in operative wounds. (Arch. Surg., May '51, W. H. Gerwig, Jr. et al)

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ACTH and Cortisone in Allergic Manifestations: In the treatment of asthma and other allergic manifestations with ACTH and cortisone, the clinical results of the authors are on a par with the claims of most workers, but are not as complete or lasting as those claimed by some others. This may be due to the types of cases selected and to the fact that for the most part no maintenance therapy with the hormones was given. It is almost superfluous to say that those asthma patients whose emphysema is the major factor in their

dyspnea will have poor response to these hormones.

On the basis of their clinical experience combined with their knowledge of the work of others, the authors discern a pattern of the uses and limitations of ACTH and cortisone. In acute status asthmaticus these hormones may shorten the course and produce complete relief. However, the effect of these agents may not be rapid enough in desperate and hazardous situations, and recourse must be had to other measures which may be lifesaving, such as epinephrine, intravenous fluids, oxygen, aminophyllin and bronchoscopic aspiration. In chronic asthma, where other methods have been exhausted, it may be permissible to administer maintenance therapy providing small doses are effective and the patient is observed regularly for side reactions. In severe allergic manifestations of limited duration the use of these hormones may be very satisfying, since the remission may be long enough to cover the natural evolution of the disease. Yet the chances of coincidental spontaneous remission make interpretation of favorable hormonal effects hazardous in such acute lesions, including such conditions as reactions to penicillin and sulfonamides. It may also include seasonal allergic manifestations in which the season is not of too long duration. Thus far, unpublished reports of the effects in hay fever have been controversial, and the impression gained is that these hormones may not be very useful for that purpose.

ACTH and cortisone are powerful drugs and must be used only with full understanding of their physiology and the indication for their use. They should not be the first approach to asthma, hay fever, or even acute manifestations such as penicillin reactions. In the majority, competent allergic study and allergic management are much more rational procedures and must precede any thoughts of hormone therapy. In the simpler and acute allergic manifestations, palliative therapy is to be tried first.

In addition to the well-known contraindications to and hazards from the use of these hormones, increasing evidence of allergy to ACTH should influence one to undertake the administration of this drug with caution. A number of workers have reported several cases of ACTH allergy and the authors have studied an instance of severe allergy to this hormone. In terms of protein sensitivity a does of 20 or 25 mg. of ACTH is an enormous quantity of antigen. This warning is especially applicable to this problem, which is concerned with the administration of this agent to people who are primarily allergic.

Summary. 1. Adrenocorticotrophic hormone and cortisone are of appreciable value in the temporary treatment of certain types and phases of allergic syndromes. They are most helpful in intractable asthma, in acute status asthmaticus and in severe drug reactions. 2. These hormones have a number of limitations in their usefulness. The length of remissions after a single course of treatment varies from a few days to a few months, the necessity for frequent injections is a handicap, and some types of allergy do not respond. 3. ACTH and cortisone are not substitutes for more basic allergic

management. 4. The dangers and hazards from continuous and sometimes from temporary use of these drugs are numerous, and the hormones must not be employed without a full understanding of their many actions. 5. In patients treated with ACTH or cortisone the skin reactions to antigens and histamine remained unchanged. 6. Quantitative studies of the ophthalmic and nasal reactions in those who have nasal and conjunctival allergy show them not to be significantly altered. 7. Sensitizing antibodies have remained unaffected after ACTH or cortisone therapy. 8. It is possible that the simple titration tests do not simulate the conditions of chronic allergy and that tests devised to resemble more closely continuous allergic stimulation might show a more decisive influence of these hormones on allergic reactivity. (J. Allergy., May '51, S. M. Feinberg et al)

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Intravenously Administered ACTH: ACTH, given by constant intravenous drip in man, is effective. Whereas 20 mg. given intravenously over a 1 minute period shows no significant adrenal cortical activation, the same amount given over a period of 2 days will triple the daily 17-ketosteroid excretion. Over an 8 hour period, 20 mg. of ACTH affords the maximum adrenal cortical stimulation in the average individual; hence nothing is gained by increasing the amount of ACTH administered at one time. However, prolonging the duration of the infusion increases the adrenal cortical response to a given dose of ACTH. In addition to representing a substantial saving in material and cost of therapy, the intravenous route activates the adrenal gland in patients unresponsive to intramuscularly administered ACTH and is capable of reactivating the adrenal cortex suppressed by cortisone therapy after 2 to 3 days. The infusion of 20 mg. of ACTH over an 8 hour period in conjunction with determination of the 0 and 10 hour eosinophil count constitutes a standardized test for adrenal cortical reserve. No instances of anaphylactic reactions have been observed. The side-effects are analogous to those observed with intramuscularly administered ACTH or cortisone. The intravenous infusion of ACTH is economical and, provided that the patient is kept under observation during the early part of the infusion, may be considered safe.

ACTH was dissolved in 500 ml. of saline solution or a 5 percent solution of dextrose in water and infused intravenously over a period of 8 hours. Over 100 patients or normal subjects were studied; 12 representative cases are described.

Six patients with rheumatoid arthritis were given ACTH intravenously for 12 to 19 consecutive days, and satisfactory remissions were obtained. It is not possible to say as yet whether the permanent results are in any way different from those obtained with large doses of intramuscularly administered ACTH. It does appear, however, that full subjective improvement is

obtained somewhat earlier in the course of therapy, usually on the 2d or 3d day and with approximately 1/5 to 1/10 of the intramuscular dose of ACTH.

In 1 case of exfoliative psoriasis resistant to intramuscular ACTH, marked clearing of all skin symptoms was obtained within 7 days with daily intravenous administration of 20 mg. of ACTH. One patient with acute exfoliative dermatitis following the use of penicillin ointment showed complete clearing of her skin after 5 days of daily intravenous administration of 20 mg. of ACTH. One patient was given 20 mg. of ACTH intravenously during an acute attack of gout with immediate decrease of pain and other inflammatory symptoms.

One patient with generalized Boeck's sarcoid involving lungs, lymph nodes, skin, muscles and the uveal tract, who had been admitted primarily because of steadily decreasing pulmonary reserve, was given ACTH intravenously (20 mg. daily) for 15 days. Pulmonary-function studies obtained before and after 10 days of therapy showed an increase in vital capacity from 850 ml. to 2450 ml., in maximal breathing capacity from 30 to 71 liters and in arterial oxygen saturation from 88 percent to 96 percent on the 10th day. X-ray examination further showed considerable clearing of the diffuse pulmonary infiltration and a moderate decrease in the size of the hilar nodes.

One patient with ulcerative colitis and rheumatoid arthritis showed improvement in both conditions during a 10 day course of intravenously administered ACTH (20 mg. daily). One patient with nephrotic edema (the nephrotic stage of glomerulonephritis), resistant to ACTH given intramuscularly (160 mg. daily), was given the drug intravenously (20 mg. daily) for 6 days. A definite fluid retention with weight gain was observed during the period of administration of ACTH and a satisfactory diuresis occurred on the 4th day after it was discontinued.

From preliminary experiences as illustrated, it appears that the clinical results obtained with intravenously administered ACTH (20 mg. daily) are quite comparable to those obtained with doses of 5 to 10 times this amount of the same material given intramuscularly. (New England J. Med., May 24, '51, A. E. Renold et al)

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Birth Marks: The removal of birth marks and proper advice to patients suffering from them is considered to be an important medical problem because of the mental anguish which the patient may suffer. There is no reason why birth marks in any location or of any type cannot be removed satisfactorily if they are entrusted to one who has had experience in their removal. The feeling that dire results may be suffered is groundless and there is no reason to fear any mental or psychologic change as a result of their removal.

The classifications under which birth marks should be considered are: (1) Nevus pigmentosus or the ordinary pigmented mole; (2) nevus pilosus or those which contain hair and usually also some pigment; (3) nevus verrucosus which resembles a group of warts; (4) linear nevus made up of wart-like projections which often form in a line either straight or curved; (5) cerebelliform mole which resembles a portion of brain tissue projecting from the skull, both in color and texture; (6) vascular nevi, including (a) the portwine mark which is made up of very small blood vessels and usually lies flush with the surface of the skin and (b) the nevus cavernosus made up of larger blood vessels or lymph vessels which usually project somewhat above the surface of the skin and which is a bright red or purplish-red if made up of blood vessels and which, if made up of lymph vessels, is soft and circumscribed but usually of the normal color of the skin; (7) follicular nevi which are very rare and resemble a group of small blackheads in linear arrangement or groups.

Nevi may be seen on any part of the body, even in such locations as on the eyeball. One such nevus, which began on the lower inner quadrant of the orbit, was making quite rapid growth until it had partially covered the iris, and would eventually have extended over the entire pupil. The portion of the sclera containing the nevus was removed surgically, the parts were sutured and healing was rapid.

In some cases the use of carbon dioxide snow pencil is all that is necessary. The pencil is made from snow collected in a chamois skin from the ordinary carbon dioxide tank used in every community for refrigerating the fountain drinks in drug stores. The snow is collected and pressed into a hollow tube until the pressed material resembles an ordinary piece of school chalk. This is then held with a small piece of chamois skin to avoid freezing the operator's fingers. It can be molded on a small toy iron to a shape closely resembling that of the nevus. It is then pressed against the nevus for a period ranging from 5 to 20 seconds, according to the tissues which underlie the deformity. The harder the tissue, as for instance on the forehead, the shorter the exposure. This treatment causes a blister to form in about 6 to 8 hours. The blister usually breaks on the 2d or 3d day and a crust is formed which remains in place for about a week. The crust then loosens and falls off to leave a small red spot the size of the frozen area which gradually fades out, leaving what appears to be a white scar. The pigment gradually grows in from the border of this scar until after a period of 6 weeks to 2 months almost no scar is discernible. This type of treatment is particularly applicable to pigmented nevus, hemangioma cavernosus and to small spider nevi which are made up of a central venule with fine radiating capillaries resembling a small red spider. When the spider nevus is treated, it is necessary only to freeze the central venule which supplies the small capillaries and they rapidly collapse.

In portwine marks if carbon dioxide pencil is used, there is great danger of leaving a mottled checkerboard appearance on the skin; a different method

is employed. Taking the carbon dioxide snow as it is recovered in the chamois skin from the tank, it is placed in a glass beaker with a glass stirring rod. A few drops of acetone are added at a time until the snow assumes the appearance of slush. This is then collected on an ordinary cotton applicator on a stick and rapidly painted over the entire area involved in the port-wine mark. If the mark is a very deep purple, it may be well to paint the area 2 or 3 times. If the mark is very large, a small part of it at a time is selected for treatment and after that portion heals the adjacent portion is treated. If conservatively handled, almost no scarring will result.

The electric cautery is of particular value in treating spider nevus or small hemangioma, especially those little red spots seen so frequently on people of advancing years. The cautery will remove those spots, usually at one sitting and with very little pain and no inconvenience to the patient. After the area has been treated with the electric cautery, the patient may bathe and wash the area with soap and water as usual, being careful not to remove the crusts before they are ready to come away easily.

Certain large hemangiomata which protrude high above the surface of the skin and whether they be of blood vessel or lymph vessel origin, usually respond well if they are first treated with radium filtered with .1 mm. aluminum. If the hemangioma extends deeply into the skin, a thick cork or wood filter should be placed between the radium and the lesion. It is much better to treat these disfigurements a large number of times rather than trying to accomplish too much at one sitting.

Cases in which small telangiectatic blood vessels remain in the scar tissue are touched at their heavier end with the electric cautery so as to eliminate them entirely. In a few selected cases electrolysis may be employed by inserting the electrolysis needle into the lumen of the blood vessel, allowing it to remain for several seconds. This usually causes the collapse of the vessel and healing of the nevus.

The only type of nevus that causes great concern to the experienced dermatologist is the melanoma. This lesion is extremely malignant and should be removed widely and x-rays should be given to the base before closure of the wound. If the melanoma measures 1 cm. in diameter, an elliptical incision should be made by the electrocautery knife, avoiding the edges of the melanoma by at least 0.5 cm., and the entire skin and subdermal tissue should be removed in one piece before x-ray is given. The wound can then be closed. In a large number of these cases seen by the author there has been no recurrence for a period of over 5 years. (Illinois M. J., May '51, H. M. Hedge)

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Treatment of Herpes Zoster: The treatment of herpes zoster is directed toward: (1) inhibition of the virus; (2) healing of the skin lesions; (3) amelioration or relief of the neuralgic pain in the area supplied by the affected sensory ganglion; (4) prevention of sequelae in ophthalmic zoster and (5) treatment of associated paralyses.

Inhibition of the Virus. The chemotherapy of virus infections is a very recent development. Aureomycin, when given early enough and in large enough dosage, gives promise in halting the progress of the infection and preventing or diminishing the associated neuralgia. Finland and his associates recommended 1 Gm. 4 times a day for 2 to 4 days followed by 0.5 Gm. 4 times a day for 3 to 5 days more. The smaller dosage may be used throughout if the tolerance is low. Binder and Stubbs gave 0.5 Gm. every 6 hours for 2 days with dramatic results in 3 cases and moderate results in 1. Nausea and diarrhea are not uncommon side effects. The expense of aureomycin must also be considered. It would seem that aureomycin should be administered in every case of ophthalmic zoster as early as possible. In other types it is a matter of choice.

Healing of Skin Lesions. The skin lesions usually heal readily even though they may be hemorrhagic or necrotic. In mild cases the application of calamine lotion N. F. is sufficient. In severe cases aureomycin ointment or a 3 percent Vioform cream is the best application. Since there is hyperesthesia of the area, protection from trauma and changes in temperature is important, especially in elderly patients. A thick layer of sterile cotton under a gauze pad supported by a binder is adequate protection.

Amelioration or Relief of Neuralgic Pain. Pain frequently precedes the skin lesions, usually accompanies them, and occasionally persists for months or years. Fundamentally, the hyperesthesia and neuralgia are due to inflammation or its sequelae in the sensory ganglion supplying the affected skin segment. Early in the course the edema, hemorrhage and exudate compress the sensory nerves, causing pain referred to their terminals in the skin. Later, the contraction of scar tissue may have the same effect. Findley and Patzer were able to afford relief in 4 cases by infiltration of the appropriate sympathetic ganglion with procaine solution. They expressed doubt as to the applicability of this method in trigeminal zoster. Combes and his associates reported favorable results in the use of dihydroergotamine-45, 1 cc. intramuscularly every 24 hours until pain was relieved. At times the dosage was increased up to 2 or 3 cc. There were few side effects. As might be expected, neuralgia of long duration responded poorly to this method.

Rosnak infiltrated the affected sensory ganglion as well as the appropriate prevertebral sympathetic ganglion with 0.5 percent procaine. In ophthalmic zoster only the gasserian ganglion was infiltrated. He stated that the procedure is not without risk and should be attempted only in exceptionally painful cases and only by a competent neurosurgeon or neurologist.

Furthermore, the method is not uniformly successful.

Even such radical measures as surgical resection of the dorsal nerve roots running from the ganglion to the cord or the destruction of the dorsal ganglion by alcohol injection may fail to relieve the pain in severe cases. Non-specific measures for relief of pain include autohemotherapy, convalescent blood, surgical pituitrin, sodium iodide, moccasin venom and x-rays.

In order to evaluate properly the various methods used for the relief of pain, it is important to distinguish between the pain associated with the acute phase and the severe persistent post-zoster neuralgia. In the early phase, sedation with acetylsalicylic acid, phenobarbital or codeine will usually give sufficient relief. Post-zoster neuralgia can be a major problem in therapy, however. Grinker and Bucy state that the failure, in many such cases, of sympathetic block or sympathectomy, as well as the failure of resection of the affected nerves proximal to the ganglion or destruction of the ganglion itself by alcohol injection, would indicate that the pain is due to a central irritative process, either in the posterior gray columns of the cord or the central medullary nuclei. In any series of reported cases large enough to be of statistical value, treated by any of the methods mentioned, there are a few recalcitrant cases, usually in post-zoster neuralgia of long duration.

Ophthalmic Zoster. Ophthalmic zoster is potentially so serious that the advice of an ophthalmologist should be sought in an attempt to prevent sequelae that might interfere with vision. Aureomycin by mouth should be started at once and aureomycin ophthalmic solution used in the eye.

Post-Zoster Paralyses. Involvement of the oculomotor nerves with lid-lag, diplopia, etc., may occur in ophthalmic zoster. Bell's palsy is common in zoster of the geniculate ganglion. These paralyses usually heal spontaneously. There is no adequate treatment for the motor paralyses of the muscles of the trunk or extremities that occasionally occur in zoster. Fortunately, they are rare and usually heal without any residuum. (Postgrad. Med., May '51, M. H. Ebert)

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Generalized Hypertrophic Osteoarthropathy: Marie and Bamberger first described the widely distributed osseous changes in the syndrome now known as generalized hypertrophic osteoarthropathy and established the process as a clinical entity. Enlargement of the acral parts, subperiosteal bone overgrowth and joint lesions, when present, are all related manifestations of the syndrome.

In the majority of instances these peripheral changes follow a primary pulmonary disease which is either initially or secondarily of an inflammatory nature. Pulmonary tuberculosis, bronchiectasis, severe emphysema, primary

or metastatic neoplasm of the lung or mediastinum and suppurative lesions of the lung or pleura are the more common exciting conditions. Diseases of the heart, especially those of congenital origin and long-standing valvular lesions, also lead to the development of the syndrome. In addition, a number of extrathoracic conditions, notably pyelonephritis, dysentery, syphilis, alcoholism, chronic intoxication with phosphorus or arsenic, jaundice and biliary cirrhosis have been held responsible.

The syndrome is known to be more common before middle life and to affect males much more frequently than females. A congenital form of digital clubbing also has been recognized but this condition differs from the secondary syndrome in that there are no associated changes in the long bones, and related joint symptoms are absent. Evidence of increased blood flow has been found in the fingertips in patients with all types of clubbing except the hereditary form.

The local factors concerned with the development of hypertrophic osteoarthropathy remain obscure although numerous hypotheses have been ventured. Various theories have given no precise explanation for the mechanism underlying the varied skeletal and soft tissue lesions of the syndrome. Real progress toward the solution of the problem of etiology must await the development of an improved method whereby the lesions can be produced experimentally; the disease is reported as a relatively frequent spontaneous occurrence in the dog.

The physical signs and the symptoms leading to the clinical recognition of hypertrophic osteoarthropathy are extremely varied. In the majority of cases widening of the terminal portions of the fingers and toes, with or without excessive curvature of the nails, is the first abnormality noted. Many patients, however, complain of intermittent pain and tenderness along the extremities or note stiffness and tenderness elicited by movement of the peripheral joints. Occasionally advanced periosteal lesions may be visible in the roentgenogram before the condition is suspected by either patient or physician. Not uncommonly, signs and symptoms pointing to the presence of the skeletal changes may antedate those referable to the primary visceral disease.

The anatomical findings aid one in explaining the varied clinical manifestations. The enlargement of the fingers and toes is due to an increase in the bulk of the soft tissues around the terminal phalanges and beneath the nails. Hyperemia, edema, increased amounts of loosely textured connective tissue and mild chronic inflammation are the predominant features of the lesion. All tissue layers from the epidermis inward to the periosteum may be affected in varying degree, the most marked change occurring in the terminal portions of the digits. Thus, clubbing may develop within relatively short periods of time or regress promptly during remissions of the underlying visceral disease. Bony overgrowth leading to "spurring" or "mushrooming" of the terminal phalanges occasionally develops in the more severely affected patients. Such

osseous lesions develop in previously enlarged digits and thus contribute little to the acral deformity. In children the amount of soft tissue swelling may be such that the terminal phalanx may undergo pressure atrophy.

The osseous lesion begins as a low-grade inflammatory reaction in the periosteum. This is followed by a remarkable degree of subperiosteal new bone formation with centrifugal displacement of the thickened periosteum. These changes may occur fairly rapidly and may thus induce pain and tenderness. Slowly progressive or quiescent lesions tend to be asymptomatic.

The periosteal changes usually are observed first along the distal third of the bones of the forearm and leg. Progression, although very irregular, is usually toward the proximal portions of these bones. At a later stage similar lesions appear along the lower ends of the femur and humerus. Still later there may be involvement of the shafts of the metacarpals and metatarsals and less frequently of the proximal and middle phalanges. The changes usually are bilaterally symmetric. There is a tendency for the process to be more marked on the dorsal and medial surfaces although pronounced lesions are especially likely to develop in areas where tendons insert. The productive changes beneath the periosteum diminish near the expanded ends of the diaphyses and rarely are present in areas covered by articular capsules. Although microscopic alterations are frequent in the terminal phalanges and in the tarsal and carpal bones, lesions distinguishable by clinical or x-ray examination rarely are observed in these areas. Lesions have been described by others in the clavicle, scapula, patella and iliac crests, and enlargements of the nose and malar prominences have been recorded.

Certain portions of the skeleton may show rapidly progressing periosteal lesions while in other areas in the same patient the process is stationary or undergoing resolution. These differences in activity afford an explanation for some of the observed variations in symptoms and also suggest that certain purely local factors must play a part.

Although the pathologic changes in articular structures often are slight in comparison with those in the neighboring periosteum, there are certain similarities in the reactions. Edema and mild chronic inflamation of the synovia and inner portions of the articular capsules are the most constant changes in painful joints, and have their counterparts in the periosteal process. The character of the synovitis is similar to that noted in other forms of painful articular disease. It appears probable, therefore, that the symptoms of joint pain and stiffness are caused chiefly by the arthritis associated with secondary osteoarthropathy and are not necessarily to be attributed solely to the adjacent periostitis. The periosteal changes, however, frequently are responsible for some of the symptoms which are considered both subjectively and objectively to have origin in the joint.

Proliferative and inflammatory changes in the synovial tissues of a degree sufficient to cause ankylosis are observed rarely. Pannus may develop occasionally and lead to adhesions across the joint space. The actual relationship of the degenerative changes in the articular cartilage to hypertrophic osteoarthropathy is not altogether clear. The only microscopic difference between such degenerative lesions in patients and in otherwise healthy persons of comparable age is the presence of resorptive changes in the subchondral bone and the penetration of vascularized tufts of marrow tissue into or through the calcified layer of cartilage. It is possible that this may be nothing more than a result of atrophy of disuse. (Am. J. Path., May-June '51, E. A. Gall et al)

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Streptomycin in the Treatment of Tuberculous Pericarditis: Clearcut indications for the use of streptomycin in tuberculous pericarditis must await increased experience. Information concerning the course of untreated acute tuberculous pericarditis with which to compare the course of streptomycin-treated cases is lacking. The author reports a small number of patients treated with streptomycin.

Tuberculous pericarditis differs from tuberculosis elsewhere in the body in that the actual healing process may cause interruption of physiological processes by constriction. Furthermore, healing and scarring may prevent high concentrations of streptomycin from reaching the tubercle bacilli. Early treatment is therefore extremely important to facilitate penetration of streptomycin into the tissues and healing with as little scarring as possible.

Because early treatment is so important, it may frequently be necessary to administer streptomycin before the diagnosis is proved. Although isolation of tubercle bacillus from pericardial fluid is extremely difficult, in many patients the diagnosis may be strongly suspected from the course of the disease or from the isolation of the tubercle bacillus from sources other than the pericardium. The cases which give the most difficulty are those in which the tuberculous process is clinically limited to the pericardium, and in which the pericardial effusion is small or in which tubercle bacilli can not be demonstrated in smear and in culture. Because pericarditis may be the first sign of widespread tuberculosis, because streptomycin is probably more effective early than late, and because little harm can be done by a course of streptomycin, the author believes that it should be administered early in questionable cases after all diagnostic procedures have been exhausted. Once started, the streptomycin therapy should be continued for several months in conjunction with para-amino-salicylic acid, even though no dramatic change in the course of the disease occurs within several weeks.

Occasionally patients with widespread tuberculosis may have increasingly severe symptoms of constrictive pericarditis. The use of streptomycin may

promote general improvement so that operation can be undertaken. Following operation streptomycin and para-amino-salicylic acid should be continued for a prolonged period to prevent spread of infection and local abscess formation. Bed rest after operation should not be neglected even though signs of constrictive peridarditis have improved. (Bull. Johns Hopkins Hosp., May '51, D. Carroll)

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Insecticide Poisoning: Because of the success that has been demonstrated in insect control by the use of chlorinated hydrocarbon insecticides, it may be expected that the use of these materials will be intensified and increased. Aldrin and dieldrin are 2 of the newer substances and will probably be used in many areas. These substances may be used either in the powdered state for dusting, or in oil as emulsifiable concentrates. Experimental evidence indicates that they have a greater chronic toxicity than any of the chlorinated hydrocarbon insecticides.

If accidental poisoning by inhalation or ingestion of aldrin and dieldrin occurs, prompt and proper action should be taken to combat the effects of these chlorinated hydrocarbons.

Signs, symptoms and treatment are discussed in "Editorials and Comments", J. A. M. A., 26 May 1951.

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Graduate Training Course for Epidemiologists: Applications are desired for a 6 months course in epidemiology for naval medical officers beginning 16 July 1951 at the U. S. Naval Medical School, Bethesda, Md.

The course will cover the important communicable and epidemic diseases which may confront the Navy in any part of the world, with emphasis upon the special laboratory technics, the epidemiology of diseases affecting masses of people, control measures, enough statistics to determine significant factors in epidemic spread of disease and a groundwork of defense against Biological Warfare, and will provide limited field experience under supervision. A large staff of nationally known specialists will conduct intensive classroom and laboratory instruction in bacteriology, parasitology, and virology techniques.

Completion of the course will give the individual student a good groundwork in one of the key sub-specialties of preventive medicine, a field which offers an unusually interesting career in the Navy, including further training and eventual Board certification. It has an especial appeal for those who see the possibilities in the reduction of disease by methods applied to environ-

ments or masses of people. Initiative and ability to work independently under all sorts of conditions are important qualifications for a worker in this field.

Medical officers of the Regular Navy, and Reserve medical officers who have applied for transfer to the Regular Navy, in the ranks of Lieutenant Commander and below, are eligible to apply for the course. While the enrollment is limited, a very few specially qualified Medical Service Corps officers may be admitted if their previous training indicates their ability to carry the course of study. Assignment to the course will constitute a permanent change of duty, permitting transportation of dependents and household effects. Applications may be made by dispatch or letter to the Chief, Bureau of Medicine and Surgery (Attention: Code 31).

Requests for the course must contain the applicant's agreement to remain on active duty for one year following completion of the course, or for one year beyond the expiration date of service for which the applicant may be currently obligated, whichever is longer. (Professional Div., BuMed.)

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List of Recent Reports Issued by Naval Medical Research Activities:

Medical Research Laboratory, U. S. Naval Submarine Base, New London, Conn.

Inspection Goggle for Checking Visible Spectral Quality of Lighting for Dark Adaptation, MRL Report No. 170, NM 113 141.40, 15 March 1951.

A Dietary Study of a Submarine Patrol in the Arctic, MRL Report No. 171, NM 002 015, 12 April 1951.

U. S. Naval School of Aviation Medicine, USNAS, Pensacola, Florida.

The Perception of the Vertical: XI The Visual Vertical Under Conflicting Visual and Acceleratory Factors, NM 001 063.01.20, 15 November 1950.

U. S. Naval School of Aviation Medicine, USNAS, Pensacola, Florida and Ohio State University.

The Effect of Delayed Side-Tone Upon Vocal Rate and Intensity, NM 001 064.01.06, 30 January 1951.

The Effect of Noise-Induced Temporary Deafness Upon Vocal Intensity, NM 001 064.01.07, 30 January 1951.

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Training Programs for Volunteer Naval Reserve Medical Personnel: The Bureau of Medicine and Surgery announces the following training programs for Volunteer Naval Reserve medical personnel for the fiscal year 1952. Inactive Volunteer Naval Reserve Medical Department personnel residing in applicable districts who desire to attend one of these programs should submit their request for training duty to the Commandant of their home naval district at the earliest practicable date.

Course in Medical Aspects of Special Weapons and Radioactive Isotopes. The Commanding Officer, U. S. Naval Medical Center, Bethesda, Maryland, plans to conduct three classes of instruction for Volunteer Reserve Medical Department Officers (MC, MSC, and NC), in Medical Aspects of Special Weapons and Radioactive Isotopes at the National Naval Medical School, Bethesda, Maryland, during fiscal 1952. It is the purpose of these courses to provide Volunteer Reserve Medical Officers with information and technics which are not available to them in their civilian capacity, yet would be invaluable to their function in the event of mobilization. These courses are similar to those formerly sponsored by the Bureau of Medicine and Surgery. Classes are scheduled as follows:

26 November - 1 December 1951
18 February - 23 February 1952
19 May - 24 May 1952

The 1st, 3rd, 4th, 5th, 6th, 8th, 9th Naval Districts and Potomac River Command have been assigned limited quotas for these courses. Meals and a limited number of sleeping quarters will be available for those officers who desire such accommodations.

Fourteen Day Active Duty for Training Program for Volunteer Naval Reserve Medical Officers in Amphibious Medicine. Three courses of instruction for Reserve Medical Department (MC and (MSC)) Officers, in the grade of LTJG and LT, are being planned at the Amphibious Training Command, U. S. Naval Amphibious Base, Little Creek, Virginia. It is the purpose of these courses to familiarize Volunteer Naval Reserve Medical Officers in amphibious operations in general, and the medical aspects thereof in particular. Materials will be presented which will give the medical officers an appreciation of the complexities of the amphibious operation and the need for careful and thorough planning to handle the medical problems that arise during such an operation. Classes are scheduled as follows:

9 July - 21 July 1951
1 October - 13 October 1951
7 April - 19 April 1952

Officers concerned should provide themselves with fatigue or utility-type uniform equipment for participation in the practical aspects of these courses. Meals and sleeping quarters will be available at the Bachelor Officers' Quarters for those officers who desire such accommodations. The 1st, 3rd, 4th, 5th, 6th, 8th, 9th Naval Districts and Potomac River Command have been assigned limited quotas for these courses.

Fourteen Day Active Duty for Training Program for Volunteer Naval Reserve Medical Officers (MC and (MSC) in Malariology and Mosquito Control. Fourteen day active duty for training courses are planned for Volunteer Naval Reserve Officers (MC and MSC) in malariology and mosquito control at the U. S. Navy Malaria and Mosquito Control Unit, No. 1, U. S. Naval Air Station, Jacksonville, Florida during fiscal 1952. Classes are scheduled to convene on the first and third Wednesdays of each month during the first, second and fourth quarter. The 1st, 3rd, 4th, 6th, 8th, 9th Naval Districts and Potomac River Naval Command have been assigned limited quotas for these courses.

Meals and sleeping quarters will be available at the Bachelor Officers' Quarters for those officers who desire such accommodations. Motor courts are usually available near the Air Station for use of personnel under training if they are accompanied by dependents. The working uniform is khaki and it is desirable that personnel have service dress uniform and civilian dress available.

Individuals may request further information by writing to this Unit.

Fourteen Day Active Duty for Training Program for Volunteer Naval Reserve Ensign (HP) Officers. Fourteen day active duty for training programs are planned for Volunteer Naval Reserve Ensign (HP) Officers during the first quarter of fiscal 1952. Upon request applicants will be ordered to the nearest naval hospital for such training on the professional services at the hospital as the Commanding Officer may consider appropriate. All Districts in the continental limits of the United States have been assigned limited quotas for this training.

Fourteen Day Active Duty for Training Program for Enlisted Volunteer Naval Reserve Medical Department Personnel. Fourteen day active duty for training programs are planned for Volunteer Naval Reserve Hospital Corpsmen during fiscal 1952. Upon request applicants will be ordered to the nearest naval hospital for such training as the Commanding Officer may consider appropriate. All Districts in the continental limits of the United States have been assigned limited quotas for this training. (Reserve Div., BuMed)

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From the Note Book

1. Dr. W. R. Lovelace II will be the new chairman of the Armed Forces Medical Policy Council, taking office 1 July 1951, and succeeding Dr. R. L. Meiling. Dr. Lovelace has been a member of the Council since its formation in January 1951. ("Washington News," J. A. M. A., 26 May '51)

2. The Atomic Energy Commission has awarded 14 new unclassified research contracts, 6 in biology and medicine, and 8 in the physical sciences, a total of 385 such projects being supported by the AEC.(Science, 18 May '51)

3. "Experiences with Dry BCG Vaccine in the Philippines" is discussed in May 1951 Diseases of the Chest. (Sofia Bona-de Santos et al)

4. "The Uses and Abuses of Antihistamine Drugs" appears in May 1951 Bulletin of the New York Academy of Medicine. (W. B. Sherman)

5. A controlled study of the effect of dramamine upon postoperative nausea and vomiting appears in Surgery, Gynecology and Obstetrics, April 1951, A. Rubin, H. Metz-Rubin.

6. In order to prove that mass blood typing may be done economically and with maximum accuracy, a pilot study has been initiated at Jackson, Michigan. The possible benefits of such a program may be briefly summarized as (1) immediate identification of the dead and unconscious; (2) giving of immediate on-the-spot transfusions; (3) immediate availability of a huge and well-catalogued file of every blood type. (Am. J. Clin. Path., April '51, J. H. Ahronheim)

7. The Federal Civil Defense Administration has issued a booklet entitled "Health Services and Special Weapons Defense." The booklet may be obtained from the Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C.

8. The management of patients with toxic goiter, exophthalmic goiter and discrete adenocarcinoma of the thyroid is presented by F. H. Lahey. (Postgrad. Med., May '51)

9. Four timely articles concerning the treatment and rehabilitation of paraplegics are presented: "Neurosurgery in the Rehabilitation of Paraplegics," by J. D. French; "Urological Aspects of Rehabilitation in Spinal Cord Injuries" by E. Bors; "Reconstructive Surgery in Spinal Cord Injuries" by A. E. Comarr and "Rehabilitation of Paraplegics" by H. Dinken. (J. A. M. A., 19 May '51)

10. Surgeon General L. A. Scheele, USPHS, was elected president of the World Health Organization at the 4th World Health Assembly in Geneva. (Washington News, J. A. M. A., 19 May '51)

11. The Office of Naval Research has made a grant to the School of Dentistry of the University of Pennsylvania for research on the prevention or cure of oral lesions produced by the use of radioactive materials. The work will be done under the direction of P. E. Boyle, professor and chairman of the Department of Oral Histology and Pathology, in collaboration with the Naval Medical Research Institute. (Science, 25 May '51)

12. "Malignant Melanoma in the Tropics" is discussed in the May-June 1951 American Journal of Pathology by W. F. Enos and R. H. Holmes.

13. "The Treatment of Esophageal Diverticulum by Inversion" appears in New England Journal of Medicine, 24 May 1951, D. E. Coburn.

14. A listing of educational opportunities in industrial hygiene, compiled from information submitted by the state and local hygiene units and directly from the schools involved, appears in Industrial Health Monthly, F. S. A., P. H. S., June 1951.

15. On 1 July, Dr. J. A. Trautman will become Director of the National Institutes of Health's new Clinical Center for Medical Research at Bethesda, Maryland. The Center, which will open in 1952, will have 500 patient beds and 1,000 laboratories for the study of the 7 major illnesses to which the 7 Institutes are devoted: cancer, arthritis, heart disease, mental illness, and neurological, metabolic and infectious diseases. (F. S. A., P. H. S., N. I. H., News Release, 21 May '51).

16. "Diagnosis of Diseases of the Pancreas" is discussed in the May 1951 West Virginia Medical Journal by J. O. Burke.

17. The Health Resources Advisory Committee of the National Security Resources Board has been transferred to the Office of Defense Mobilization, Charles E. Wilson, Director. The Committee has been responsible for advising the NSRB, and for making policy recommendations on personnel, environmental sanitation, veterinary medicine, utilization of health facilities, provision of health equipment and supplies and maintenance of essential teaching and research; and has also served as the National Advisory Committee to Selective Service on the selection of physicians, dentists, and allied specialists. (ODM, News Release, 18 May '51)

18. Dr. A. J. B. Wace, professor of archeology at Farouk I University, Alexandria, Egypt, reports that fingerprints of men who sealed jars containing oil, probably about 3,500 years ago, were still clear when the jars were unearthed. (Science News Letter, 5 May '51)

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BUMED CIRCULAR LETTER 51-84 22 May 1951

From: Chief, Bureau of Medicine and Surgery
To: All Medical Department Activities and Facilities

Subj: DENTAL RECORD, NAVMED-H4 (Rev. 2-51)

Ref: (a) BuMed Cir Ltr 50-144

1. Paragraph 2 of reference (a) is hereby cancelled.

2. The subject DENTAL RECORD replaces the DENTAL RECORD, NAVMED H-4 (1943). All Medical Department activities using this form shall obtain a supply without delay and destroy all quantities of the NAVMED H-4 (1943) on hand.

3. The numbering of the mandibular teeth in the dental chart has been changed and is in accord with the arrangement adopted by the Interagency Committee on Medical Records. This arrangement is now standard for the Army, Navy, Air Force, Veterans Administration and Public Health Service.

4. Roots have been added to the teeth in the dental chart. Root canal fillings, and diseases and abnormalities involving roots and the supporting tissues of the teeth may now be recorded in greater detail.

5. The purpose for which the examination is made shall be indicated on the line "PURPOSE OF EXAMINATION" by an "X" in the box "INITIAL" when the first dental examination is being made for personnel entering the Navy or Marine Corps; and in the same manner in the box "SEPARATION" when the examination is being made for personnel being separated from active service. When a dental examination is made for any other purpose, it shall be so indicated in the box "OTHER-SPECIFY"; example, "Special Examination", "Corrected Record", "Replacement" (for missing record), "Supplementary" (to existing record), "Fleet Naval Reserve", etc. THE "TYPE OF EXAMINATION", and "CLASS" shall be indicated in accordance with enclosure (1) of reference (a). These entries shall not be changed after the NAVMED-H4 (Rev. 2-51) has been signed.

6. Dental officers shall prepare a new DENTAL RECORD, NAVMED-H4 (Rev. 2-51) in the cases of persons whose health records contain the older type dental records at such times as those persons may be given dental treatment. All others whose health records contain the older type dental records shall be reexamined for the purpose of supplying new dental records as time and occasion permit, the objective being a revised DENTAL RECORD ultimately for every person in the Navy and Marine Corps. The NAVMED-H4 (Rev. 2-51) shall be made in duplicate, the original to be inserted in the HEALTH RECORD immediately preceding the old DENTAL RECORD; the duplicate shall be forwarded to the Bureau of Medicine and Surgery.

7. All correspondence relating to the new numbering of the mandibular teeth shall reference paragraph 3 of this letter until such time as the transition has been completed. H. L. Pugh

The above letter will not be printed in the Navy Department Bulletin.

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JOINT LETTER

BUMED CIRCULAR LETTER 51-85 24 May 1951

From: Chief, Bureau of Medicine and Surgery
Chief, Bureau of Naval Personnel

To: The Commandants all Continental Naval Districts and River Commands

Subj: Navy deceased personnel, including return of remains from overseas to United States for burial

1. The following is designed to clarify the responsibilities and procedures for processing Navy deceased personnel and to clear up local misunderstandings.

2. There are now three classes of Navy deceased personnel: World War II dead, current dead, and dead temporarily interred in Korea.

3. The Quartermaster General of the Army is responsible for search, recovery identification, repatriation and reburial of all World War II dead. These responsibilities likewise include necessary contacts with the next of kin, arrangement for honors and payment of burial allowances. Established procedures in the field for handling that class of deceased personnel are still effective.

4. The Bureau of Medicine and Surgery and its representatives in the field are chargeable with all responsibility in connection with processing and handling of remains of current non-interred Navy dead in accordance with pertinent regulations and manuals of the Navy Department.

5. The program for return of disinterred Navy dead from Korea shall be administered by the Bureau of Medicine and Surgery and the Bureau of Naval Personnel in conjunction with the Quartermaster General of the Army. The following additional information is provided relative to this program.

a. Certain services offered by the Quartermaster General of the Army in regard to Navy Korean dead have been accepted by the Department of the Navy.

These services include, among others, search, recovery, identification, preparation and encasement in the field, followed by shipment of remains to the United States, delivery of remains to Navy escort units at the Army Port of Embarkation, Oakland, California or New York City as appropriate and schedule of rail shipments of remains in the United States. Reimbursement will be made by the Bureau of Medicine and Surgery for the caskets and for all expenses incurred, with the exception of military pay, inside the continental limits of the United States. All contact with the next of kin, shipment under escort and transportation requests in connection therewith, burial flags, arrangements for honors, and payment of burial allowances to the next of kin are exclusive Navy responsibilities.

b. Normally, if the disinterred remains of the Korean war dead are to be buried west of the Mississippi River, the Navy escort units at the Army Port of Embarkation, Oakland, California, will process. If interment is to be east of the Mississippi River, the Navy escort unit at the Army Port of Embarkation, New York City, will process. When the remains are ready for shipment to the next of kin, the designated mortician or the cemetery representative and the next of kin will be notified by the escort unit as to the time and place of arrival of remains, mode of transportation and the name of the escort. The Commandant of the district or river command in which burial is to take place will also be informed.

6. Under most circumstances, arrangements for honors for disinterred Korean war dead will be made by the next of kin with local patriotic organizations and the packet of each escort will include ammunition for use by the local firing squad if needed. All requests for honors to be rendered by other than local patriotic organizations will be passed to the Commandant of the district or river command concerned for action and direct contact with the next of kin. Instructions previously promulgated to the field on the subject of honors for all dead continue to be applicable.

H. L. Pugh L. T. DuBose

The above letter will not be printed in the Navy Department Bulletin.

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JOINT LETTER

BUMED CIRCULAR LETTER 51-86 24 May 1951

From: Chief, Bureau of Medicine and Surgery
Chief of Naval Personnel

To: All Ships and Stations

Subj: Corrective measures to improve presently established procedures in determining the physical qualifications of NROTC candidates; promulgation of

Encl: (1) Information Brochure for Medical and Dental Officers Examining NROTC Applicants

1. In past years the Bureau of Naval Personnel and Bureau of Medicine and Surgery have had to conduct voluminous correspondence relative to the physical or dental qualifications of many individual applicants for enrollment in the NROTC because information in reports of physical examinations was inconclusive. In many other cases, the findings of the examiners have been reversed by the Bureaus because of unexplained items in the history or in the physical findings, or because of erroneous interpretation of standards by the examiners. This has particularly pertained to enrollment of applicants as Contract students. This administrative difficulty arises from one or more of the following:

a. Reports of medical or dental examination are incomplete.

b. Reports of medical or dental examination contain insufficient comment upon significant findings.

c. Reports of medical history are not submitted, or are incomplete.

d. Reports of medical history lack sufficient comment on significant items so that their significance can be evaluated properly.

e. The medical or dental examiner lacks familiarity with the physical and dental standards.

f. The medical or dental examiner lacks familiarity with the policy for administration of physical and dental standards.

2. The above circumstances apparently arise in most instances because the medical or dental examiner is only temporarily detailed to the task of examining NROTC candidates. His regular duty may have made him familiar only with less restricted types of physical examination. He even may have been altogether disassociated from administering physical examinations for a considerable period of time.

3. In order to correct this situation, enclosure (1) has been prepared for the indoctrination of each medical or dental officer, or member of a board of medical examiners, assigned to duty or to temporary additional duty for physical examination of NROTC candidates.

4. It is directed that the command to which such examining officers or boards report, in connection with examination of NROTC candidates, require each

such examining officer or examining board member to read enclosure (1) prior to conducting physical and dental examinations upon applicants for entry into the NROTC program. The command shall repeat this procedure annually, in order to indoctrinate medical and dental officers assigned to such duty for the first time, and to refresh the recollection of those officers who previously have had such duty.

H. L. Pugh L. T. DuBose

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BUMED CIRCULAR LETTER 51-87 29 May 1951

From: Chief, Bureau of Medicine and Surgery
To: Naval Hospitals; Naval Dispensaries; Dental Clinics; Inspectors, Naval Dental Activities; Inspector, Naval Medical Activities; Naval Medical Supply Depots; Naval Medical Center, Bethesda, Maryland (Distribution limited to continental U. S. activities only)

Subj: Nickel-bearing scrap and tin cans; accumulation and sale of

Ref: (a) BuSandA Cir. Lt. S-02 L8-5 A2-6/1 of 21 Feb.1951
(b) ONM ltr M63/RWS:rs of 19 Feb 1951
(c) BuSandA Manual, paragraph 26165-2
(d) BuSandA Manual, paragraph 26164-54

1. References (a) and (b) advised all bureaus that the present international situation had resulted in critical shortages of tin and nickel.

2. To assist in relieving these commercial shortages, all addressees within continental limits of the United States are directed to commence intensive salvage programs as follows:

(a) Activities generating nickel-bearing scrap shall segregate it from other scrap in accordance with reference (c) and dispose of it through authorized selling activities. Examples of items containing nickel-bearing metals are stainless steel items, certain automotive and construction items, laundry equipment and items of hardware, all of which are easily identified and can be segregated.

(b) Tin cans shall be collected and prepared in strict accordance with reference (d) and disposed of through authorized selling activities.

3. Immediate and continuing action is requested in order that the two salvage programs described above may be made effective.

H. L. Pugh

Circular Letter 51-87 will not be printed in the Navy Department Bulletin.

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BUMED CIRCULAR LETTER 51-88 1 June 1951

From: Chief, Bureau of Medicine and Surgery
To: All Ships and Stations

Subj: Quarantine regulations; rinderpest and foot-and-mouth disease

Ref: (a) General Order No. 20 (revision pending)

1. Rinderpest and foot-and-mouth disease offer a constant threat to our nation. The Bureau of Animal Industry, U. S. Department of Agriculture, is charged with the responsibility of prohibiting the importation of certain products from countries where either foot-and-mouth disease or rinderpest has been determined to exist.

2. Prohibited items are domestic ruminants or swine, and fresh, chilled or frozen meats, organs, glands, extracts, or secretions derived from such animals or from wild ruminants or swine from countries designated as having these diseases. By Bureau of Animal Industry's Order No. 373, revised 15 November 1950 and its CFR Amendment 51-3, four countries have been dropped from those exempt to the importation prohibitions of May 1950.

3. Currently, countries designated as infected include practically all countries of the world except Canada, Australia, New Zealand, Iceland, Greenland, Republic of Ireland, Northern Ireland, the Channel Islands, Norway, and the Islands of the West Indies.

H. L. Pugh

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BUMED CIRCULAR LETTER 51-89 1 June 1951

From: Chief, Bureau of Medicine and Surgery
To: Commanding Officers, Naval Hospitals

Subj: Hospital atlases; data for

Ref: (a) BUMED Cir Ltr No. 48-59 of 26 May 1948
(b) Art. 23-255, ManMedDept

Encl: (1) Outline of subject atlases

1. Reference (a) which has recently been superseded by reference (b), requested certain data to be used in the compilation of atlases for each naval hospital. The information subsequently submitted to the Bureau was in some respects incomplete and is now somewhat outdated. To increase the value of atlases for general reference purposes, certain types of data must be periodically added and should be submitted annually at a convenient time after 1 January each year.

2. It is requested that each addressee submit as soon as possible the following additional information for the indicated part of the atlas shown in enclosure (1).

a. Part I.--Any significant general developments in the hospital's history during the past 3 years. This should not be more than three pages in length.

b. Part II.--Items of interest and significance with reference to joint hospitalization. The general statement of each hospital's mission is of course available in the Bureau.

c. Part IV.--(Information has already been supplied in response to other Bureau directives.)

d. Part V.--Information desired on professional services includes data regarding such matters as local blood banks, blood-vessel banks and bone banks; tumor boards, and any other special professional boards, with an indication of their membership and method of selecting members if significant; also training programs oriented toward military medicine.

e. Part VI.--Information desired regarding cooperation with local professional groups, civilian defense organizations, or civilian blood banks; and training programs which involve cooperation with civilian agencies.

f. Part VII.--A photograph of the commanding officer on his assumption of command; and recent photographs of important buildings and professional activities--if not previously submitted.

H. L. Pugh

The above letter will not be printed in the Navy Department Bulletin.

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BUREAU OF MEDICINE AND SURGERY
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